



Mechanical Engineering A.S. Degree

PART TIME

This program roadmap represents one possible pathway to complete the program. **Please see a counselor** to create an education plan that is customized to meet your needs. This roadmap is not a guarantee of course availability or financial aid applicability.

Catalog: 2024-25

GE Pattern: local AA/AS

Total Units: 66

First Year

Semester 1

9 Units

| CAT. | COURSE | TITLE | UNIT | GE AREA |
|------|------------------------------|--|------|---------------|
| RC | ENGR 300 | Introduction to Engineering | 1 | |
| GE | ENGWR 300 / 480 ^H | College Composition | 3 | IIa WC |
| GE | | any Area IIIb (Life Development Skills) course | 2 | IIIb |
| GE | | any Area I (Humanities) course | 3 | I |

Semester 2

8 Units

| CAT. | COURSE | TITLE | UNIT | GE AREA |
|------|----------|---|------|---------------|
| Req | MATH 400 | Calculus I | 5 | IIb MC |
| GE | | any Area Vb (Social & Behavioral Sciences) course | 3 | Vb |

Second Year

Semester 3

8 Units

| CAT. | COURSE | TITLE | UNIT | GE AREA |
|------|----------|----------------------|------|---------|
| Req | MATH 401 | Calculus II | 5 | |
| Req | ENGR 312 | Engineering Graphics | 3 | |

Semester 4

8 Units

| CAT. | COURSE | TITLE | UNIT | GE AREA |
|------|----------|--|------|---------|
| Req | MATH 402 | Calculus III | 5 | |
| GE | | any Area Va (American Institutions) course | 3 | Va |

Third Year

Semester 5

9 Units

| CAT. | COURSE | TITLE | UNIT | GE AREA |
|------|----------|------------------------|------|---------|
| Req | CHEM 400 | General Chemistry I | 5 | IV |
| Req | MATH 420 | Differential Equations | 4 | |

Semester 6

8 Units

| CAT. | COURSE | TITLE | UNIT | GE AREA |
|------|--------|-------|------|---------|
|------|--------|-------|------|---------|

4 YEARS

TRANSFER PATH

Potential Transfer Majors:

- Mechanical Engineering B.S.

This map prepares students for the A.S. degree. Additional major requirements and general education courses are needed for transfer. [See a counselor](#) to create an educational plan that prepares you to transfer.

Potential Career/Options After Completing a Bachelor's Degree:

- automotive engineer
- heating and cooling systems (HVAC) engineer
- robotics engineer
- manufacturing engineer

Advising Notes:

- Students can substitute ESLW 340 for ENGWR 300/480.
- This map starts with MATH 400 and CHEM 400, which have prerequisites. Please [see a counselor](#) to add in prerequisite courses, if needed.

Other Notes to Students Preparing to Transfer:

- Additional coursework may be required. Work with a counselor and [ASSIST.ORG](#) to determine the courses needed for your goals.

Honors Courses (H):

| CAT. | COURSE | TITLE | UNIT | GE AREA |
|------|----------|---|------|---------|
| Req | PHYS 410 | Mechanics of Solids and Fluids | 5 | |
| GE | | any Area VI (Ethnic/Multicultural Studies) course | 3 | VI |

Students with a cumulative GPA of 3.2 or better who complete 15 or more units of Honors coursework earn an Honors Transfer Certificate and can take advantage of honors-to-honors transfer agreements with highly selective colleges and universities, both public and private.

Fourth Year

Semester 7

8 Units

| CAT. | COURSE | TITLE | UNIT | GE AREA |
|------|----------|---|------|---------|
| Req | PHYS 421 | Electricity and Magnetism | 4 | |
| Req | ENGR 420 | Statics | 3 | |
| GE | | any Area IIIa (Physical Education) course | 1 | IIIa |

Semester 8

8 Units

| CAT. | COURSE | TITLE | UNIT | GE AREA |
|------|----------|---|------|---------|
| Req | ENGR 401 | Introduction to Electrical Circuits and Devices | 4 | |
| Req | ENGR 412 | Properties of Materials | 4 | |

EXPLANATION OF CATEGORIES

| | | |
|-----|--------------------|---|
| RC | Recommended Course | A course that is not part of this program but is included in its roadmap |
| GE | General Education | A course that fulfills a specific general education requirement for a degree, which can be replaced with another course that meets the same requirement |
| Req | Required Core | A course that is required for this program |

Graduation Requirement

A course that fulfills a specific graduation requirement which can be replaced by another course that meets the same graduation requirement.

MC = Math Competency

WC = Writing Competency